

Notice of Allowability

Application No.

09/546,392

Examiner

John B. Strege

Applicant(s)

WATANABE ET AL.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed 8/23/06.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

JINGGEWU
PRIMARY EXAMINER

Response to Arguments

1. Applicant's arguments, see the Appeal Brief filed 8/23/06, with respect to claims 1-32 have been fully considered and are persuasive. The rejection of claims 1-32 has been withdrawn.

Allowable Subject Matter

2. Claims 1-32 are allowed.

3. The following is an examiner's statement of reasons for allowance: regarding claim 1, as persuasively argued by the Applicant, none of the prior art discloses in combination with the other limitations a robot system having an image processing function for determining orientation of a robot operation on one of a plurality of objects, comprising a processor to perform matching on the image data containing images of the plurality of objects captured by said first image capturing device with each of said reference models successively to select one object having an image matched with one of said reference models, and to determine orientation based on the image of the selected one object, based on said one reference model and the information of its associated capturing direction, and based on the information of the orientation of the robot operation with respect to the reference object that is associated with said one reference model. Thus claim 1 and its dependent claims 2-11, and 27-29 are allowable over the prior art. Claim 12 has similar limitations to claim 1, thus claim 12 and its dependent claims 13-22, and 30-32 are allowable for the same reasons given for claim 1.

Regarding claim 23, as persuasively argued by the Applicant, none of the prior art discloses in combination with the other limitations a method for automatically determining an arrangement of a workpiece relative to a robot, where the determined arrangement comprises at least rotational posture arrangement of the workpiece relative to the robot, the method comprising storing reference images corresponding to images of the workpiece and reference arrangement information indicating arrangements of the robot and workpiece relative to each other when the images were captured, the reference arrangements comprising rotational arrangements of the workpiece relative to the robot; and from a known arrangement of the robot, capturing a working image of the workpiece among a plurality of randomly arranged workpieces with an imaging device. Thus claim 23 is allowable over the prior art. Claims 24-26 depend on claim 23 thus are allowable for the same reasons given for claim 23.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Strege whose telephone number is (571) 272-7457. The examiner can normally be reached on Monday-Friday between the hours of 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

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